Pacific Fisheries Resource Conservation Council

The Salmon Aquaculture Forum:

Discussion Paper On Practices & Findings

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Discussion Paper on Practices & Findings

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EXECUTIVE SUMMARY

This discussion paper on practices and findings provides information that was requested by federal and provincial ministers for their joint establishment and implementation of a Salmon Aquaculture Forum. Ministers asked for information to serve as a basis for structuring the new organization as well as ways to make it effective in bringing stakeholders together and determining common ground in which environmental, social and commercial interests could be acknowledged and accommodated.

Government procedures for securing consensus have not, as yet, forged sufficient common purpose to lay the foundation for reasonable accommodation of the competing interests that are involved.

No one involved in the salmon aquaculture controversy was satisfied that previous processes were leading to solutions. They recognize that there is value to both participants and governments in a rational process that would deal with the often emotional issues and enable wide, constructive public participation. Advisory groups serve a different purpose than consultations, in their role in building relationships and consensus among stakeholders.

The experience of past consultations, advisory groups, and other initiatives provides lessons for the Salmon Aquaculture Forum, including the importance of establishing clear and reasonable expectations about the scope of discussions and possible outcomes. Experience elsewhere provides useful comparisons. However, the uniqueness of the salmon aquaculture situation in British Columbia compared to Europe and other jurisdictions has to be recognized, particularly the treaty rights and governance positions of First Nations that give them a crucial role in determining the direction of future development.

Our findings from extensive discussions with stakeholders, governments and community groups revealed a range of suggestions, cautions and warnings to be kept in mind as the Salmon Aquaculture Forum is designed.

Suggestions about transparency, constructive dialogue and the need for good faith among the participants were consistently expressed in the discussions, regardless of the strong differences of opinion that individuals had about the substance of the public policy issues.

The best practices of other consensus and advisory organizations were raised as being critical relative to membership criteria, procedures for aboriginal involvement, leadership traits and operational rules, among many other points.

Some observations are presented on what it will take, apart from the activities of the Forum itself, for the primary stakeholders to deal with the challenges of salmon aquaculture. Stakeholders will need to change or adapt their approach to achieve tangible progress for the environmental and commercial sustainability of salmon aquaculture.

Additionally, improvements to the broader framework of government advisory groups and consensus-building are suggested to enable future initiatives like the Salmon Aquaculture Forum to become effective in their public participation and to facilitate more productive processes.

Our recommendations are contained in the separate report entitled ***The Salmon Aquaculture Forum: Briefing Note to Ministers***. It provides the specific proposals for the organizational architecture, membership, procedures and other key elements for the formation and activities of the Forum.

SOMMAIRE

Ce document de discussion fait suite à la demande des ministres fédéral et provincial de réunir de l'information sur les pratiques salmonicoles, en vue de l'établissement d'un Forum sur la salmoniculture. Les ministres ont demandé que soit réunie l'information requise pour l'établissement de cette nouvelle structure qui sera un lieu de rencontre et d'échange pour tous les acteurs de l'enjeu, et où les intérêts environnementaux, sociaux et commerciaux seront reconnus et pris en compte.

Les actions gouvernementales mises en œuvre pour établir un consensus n'ont pas encore permis la création d'une base commune d'objectifs propre à concilier les divers intérêts en jeu.

Aucun intervenant de la controverse que suscite la pratique de la salmoniculture ne pense que les processus proposés à ce jour pourraient constituer des pistes de solution. On estime toutefois que les intervenants et le gouvernement ont intérêt à inscrire un débat souvent émotif dans un processus rationnel qui fera une large place à la participation des citoyens. Les groupes consultatifs n'ont pas pour rôle de consulter, mais bien de construire des relations et de favoriser les consensus.

Le forum sur la salmoniculture tirera parti de l'expérience des consultations déjà effectuées, des groupes consultatifs et des actions du passé, notamment de la reconnaissance du fait qu'il importe que les discussions aient des objectifs clairs et réalistes et que les attentes soient raisonnables. Les expériences acquises ailleurs peuvent fournir des exemples utiles. Mais le caractère particulier de la problématique salmonicole de la Colombie-Britannique par rapport à la salmoniculture européenne et d'ailleurs doit être reconnu, particulièrement en ce qui concerne le facteur des traités et du pouvoir de gouvernance des Premières nations, qui confèrent à celles-ci un rôle crucial dans l'orientation du développement futur de l'activité salmonicole.

Les discussions très étendues que nous avons eues avec les intervenants, les gouvernements et les groupes locaux ont permis la formulation de toute une gamme de recommandations, de réserves et d'avertissements sur la structure du Forum sur la salmoniculture.

Les participants se sont dits très soucieux que les activités du Forum se déroulent dans la transparence, dans un esprit de dialogue constructif et dans la bonne foi, quel que soit le degré de divergence des opinions quant au fond de la question.

Les bonnes pratiques adoptées par les autres organismes de dialogue et de consultation ont été citées comme étant d'une importance critique, en particulier pour ce qui concerne les critères de composition du forum, le cadre de participation des Autochtones, les qualités du personnel d'encadrement et les règles de fonctionnement de l'organisme.

Certaines observations traitent plus particulièrement de ce qu'il faudra, en dehors des activités du forum proprement dit, pour que les principaux acteurs puissent arriver à trouver des solutions aux divers problèmes que pose la salmoniculture. Les acteurs devront modifier ou adapter leur approche pour que des progrès concrets soient faits dans le développement d'une activité salmonicole commercialement et écologiquement viable.

Enfin, il est recommandé que le cadre de fonctionnement des groupes consultatifs et des structures de consensus soit amélioré afin que les futures initiatives comme celle du Forum sur la salmoniculture soient plus propices à la participation du public et à la productivité des processus mis en place.

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Nos recommandations sont contenues dans le rapport intitulé ***The Salmon Aquaculture Forum: Briefing Note to Ministers*** (traduction libre : Le Forum sur la salmoniculture : note de breffage à l'intention des ministres). Ce rapport contient des recommandations portant spécifiquement sur la structure organisationnelle, la composition, les procédures et autres éléments importants de la constitution et des activités du Forum.

1. Mandate and Procedures

Salmon aquaculture has been one of the most controversial and divisive topics of discussion and public debate in British Columbia. Opposing opinions on the effects and future development of salmon aquaculture have been highly polarized and emotional.

There has been no successful venue for salmon aquaculture issues to be discussed in productive ways, and few procedures put in place to deal constructively with the real or perceived problems, opportunities and risks. The public debate has taken place primarily through proxies involving the news media, radio talk shows and public relations campaigns. The result has been the build-up of unresolved controversies, causing many British Columbians to become concerned and apprehensive about salmon aquaculture, its products and practices.

A parallel debate, with similar polarization of views and anxieties, has occurred across First Nations communities, with an array of views expressed about salmon aquaculture's impacts and prospects. The September 2002 summit on salmon aquaculture sponsored by the BC Aboriginal Fisheries Commission illustrated the differences in views among First Nations groups and the difficulty of achieving a degree of consensus.

The experience of companies and environmental groups in British Columbia's forest industry provides a reference point for the harm that can be created in resource disputes and the difficulty in reconciling the interests of people and organizations involved in them. In the case of the forest industry nearly a decade ago, consensus-building and reconciliation of interests were initiated too late to offset much of the damage in both environmental and commercial terms.

The salmon aquaculture industry is regulated by both federal and provincial governments, and needs consistency in its treatment by those governments. Salmon aquaculture will neither simply go away nor expand unchecked. It is expected to continue to be a significant industry in British Columbia. At the same time, its practices must satisfy public expectations, and the industry must earn public understanding and acceptance. This includes reliable assurances that salmon aquaculture's benefits are being maximized while its risks are being minimized.

1.1 Breaking the Cycle

British Columbians have recognized that ways must be found to deal with the legitimate concerns of both opponents and advocates of salmon aquaculture. The animosity and personal attacks have done little but create even more difficulty in reaching agreement on the interpretations of scientific evidence or the appropriateness of industry practices. The Pacific Fisheries Resource Conservation Council's 2002-2003 annual report described the situation:

The bitterness and anger that have characterized the public dialogue about salmon aquaculture in British Columbia have demonstrated how polarized attitudes can become and how difficult it can be to build consensus... Like many public issues in this province, the debate about salmon aquaculture has provoked strong emotional reactions rather than informative discussion. The clash of opposing views has been amplified by the media coverage that dwells on points of conflict and generally ignores those where consensus may exist. The atmosphere of accusations and contradictions in most discussions about salmon aquaculture in British Columbia has tended to hinder any progress towards resolving both genuine and perceived problems.

In January 2003, the Pacific Fisheries Resource Conservation Council released a consultants' background paper that examined the assumptions and scientific information supporting the divergent arguments about salmon aquaculture. It was

meant to contribute towards better public understanding about the actual and potential impacts of salmon aquaculture on wild salmon. The Council shortly afterwards proposed the creation of a Salmon Aquaculture Forum to begin a process of building public consensus about the future direction of the industry.

To their credit, the governments of Canada and British Columbia decided in April 2003 to proceed with the establishment of a jointly sponsored Salmon Aquaculture Forum. The Honourable Stan Hagen on behalf of British Columbia and the Honourable Robert Thibault acting for Fisheries & Oceans Canada committed their governments to an unprecedented joint effort to improve the dialogue and seek constructive solutions to controversies associated with salmon aquaculture.

The two ministers asked John Fraser, Chairman of the Pacific Fisheries Resource Conservation Council, to investigate options and to recommend to them how the Forum should be structured, organized and implemented. John Fraser in turn asked Ken Beeson, a policy advisor to the Council, to work with him to produce a discussion paper on practices and findings and the briefing note to ministers on the Forum. The ministers recognized that the Salmon Aquaculture Forum would have to be established with considerable care to ensure that its outcomes would be effective and credible. The Forum would have to serve the interests of the environmental, First Nations and industry stakeholders, and involve governments and the public in the process of determining where environmental and commercial interests could be acknowledged and accommodated.

1.2 This Discussion Paper

In the mandate assigned to John Fraser, the discussion paper was to relate the practices of advisory groups dealing with resource issues, as well as outline the findings of an extensive set of interviews, meetings and discussions held across British Columbia. Those discussions were held with groups and individuals representing the array of interests and perspectives in salmon aquaculture. They included representatives of environmental organizations, industry, First Nations, municipal governments, federal and provincial departments and agencies, the fisheries sector, universities, labour, community organizations, and industry and professional associations. Several individual citizens also participated in discussions to provide additional views and contribute their ideas. Meetings were held throughout the months of May, June and July, and included travel across Vancouver Island and to Prince Rupert to accommodate requests for meetings in several communities.

Considerable research was carried out to identify the best practices of organizations with similar goals and challenges as the proposed Salmon Aquaculture Forum, with particular attention to advisory and consensus-building groups in Canada and other countries. In addition, the role of science and its potential contribution to conflict resolution in resource issues were investigated.

The discussions with stakeholders, First Nations and individuals took place on a non-attribution basis in order to encourage full and frank comments and expression of opinions. As a result, this discussion paper does not specifically quote or cite the sources of the comments, nor does it provide specific reference to the views expressed by the various participants. The comments that were provided in the discussions are reflected in the chapter on findings and elsewhere in this discussion paper without quoting each of the sources.

The time constraint of only three months in mid-summer to produce the discussion paper, briefing note and recommendations permitted the opportunity for extensive, but not exhaustive, meetings and discussions. It was assumed that there would be a period

for public comment following public release of the discussion paper, in conjunction with implementation by both governments.

While there are compelling reasons to expand the Forum's mandate sometime in the future to include all marine species in aquaculture, it was felt that the most immediate issues related to salmon, and the effort should be placed on dealing with them.

1.3 Briefing Note to Ministers

A second and separate report -- ***The Salmon Aquaculture Forum: Briefing Note to Ministers*** -- has been produced in conjunction with this discussion paper on practices and findings. That report provides information and recommendations on the:

- organizational architecture for the Salmon Aquaculture Forum in light of the cross-jurisdictional nature of aquaculture, First Nations issues, and the wide range of interested parties and the public wishing to be informed and involved;
- funding and options to cover the costs on an on-going Forum;
- local area management structures that include First Nations and stakeholder participation; and,
- identification of Forum membership constituting a balance of informed yet "interest-free" perspectives.

The purpose of that ***Briefing Note to Ministers*** is to present the specific recommendations on establishing an appropriate organization, spelling out how it could operate to everyone's advantage in a constructive dialogue and approach.

2. Advisory Processes and Consensus-Building

The function and value of external advisory groups and public participation were succinctly described in the Encyclopedia of Governmental Advisory Organizations:
Advisory committees are a device for making available to the government, at little or no cost, the knowledge and expertise of the leadership in all fields of business, industry, education, science and technology, and the arts and professions. They can innovate, educate, coordinate and, to some extent, regulate; the boundaries between functions in many instances may be indistinct.

The British Cabinet Office expressed its government's view:
Task forces, ad hoc advisory groups and reviews provide independent, expert advice to Government on a wide range of important issues – including health, education, transport and crime. They are an effective means of securing high quality advice on matters of real public concern and seek to operate in as open and transparent a fashion as possible.

The Government of British Columbia has a long tradition of using public advisory groups to provide guidance on crucial issues. These councils, committees, expert panels, task forces and other organizations share the characteristic of involving individuals from outside government to provide guidance on policies and public issues. Several new public advisory groups have been created by the Government of British Columbia in the past two years to deal with controversial questions, reflecting the cost-effectiveness of this sort of public participation.

There are hundreds, if not thousands, of advisory organizations sponsored by the Government of Canada, dealing with an array of issues and topics. For instance, the Pacific Region of Fisheries & Oceans Canada alone has seventy-seven public advisory groups on aspects of fisheries management, allocation, science and related fisheries matters.

2.1 Value to Governments

By tapping the expertise of people in advisory groups, governments are able to draw from an array of occupational, industry and interest groups, as well as geographical areas, to provide different points of view and reconcile those perspectives.

The notion of organizations needing to seek out diversity of opinions and encourage participation through advisory processes is not restricted to government. Management guru Peter Drucker has suggested that the managers of both public and private sector organizations must seek outside advice. What they need, according to Drucker in his 1999 book, *Management Challenges for the 21st Century*, is better quality of information and perspectives from a variety of sources. He suggests that managers need:
...information about how other people, with other jobs, other knowledge, other values and other points of view, see the world, act and react, and make their decisions.

Advisory groups have often proven their value to governments that want to test the practicality of possible initiatives or generate new public policy ideas. The endorsement of initiatives by groups of external experts, such as the BC Recreation Stewardship Panel, have provided validation for proposed policy directions, as well as generating improvements to their implementation plans.

Advisory groups are able to include members comprising a range of often-opposing points of view, and they are expected to provide a mediated atmosphere where differences can be accommodated and shared stances can be taken. The participants are expected to sort out their differences and break stalemates in their opposing positions. In short, advisory groups typically encourage a resolution process, and enable divergent views to be set aside or reconciled

in order to present coherent advice to governments.

In some cases, advisory groups are established to enable an emotional issue to be addressed in a rational and dispassionate way. In those instances, there is often an educational role by the advisory group members to provide the public with confidence and assurance that issues are being appropriately addressed.

2.2 Notions of Public Participation

A typical objective of advisory groups and consultations is the achievement of consensus. In the British Columbia Land and Resource Management Planning process, the participants defined consensus to be acknowledgement of statements and views on which there is "...no substantial disagreement on a position." They added that: "Consensus may consist of agreement on a document that describes different points of view on an issue."

The exchange of information and the creation of a conduit for ideas, viewpoints and other input from important organizations and stakeholders are important functions of advisory groups.

Governments are constantly involved in what has come to be known as consultation with stakeholders (representatives of organizations and interests) and community leaders. Consultation has a wide definition that encompasses several forms of activity in seeking opinions and advice from public meetings to surveys to requests for formal submissions.

The duty to consult has taken on an increasingly tangible form for First Nations in British Columbia. The participation by First Nations in discussing matters of public policy has been defined and given greater recognition in the growing body of law regarding First Nations' rights and claims to title. A number of developments in case law have been altering the ways in which government decision-making must take account of First Nations' interests, particularly related to any development such as salmon aquaculture that might impact their rights and traditional territories.

The federal and provincial governments have a duty to consult with First Nations people regarding any development in their title lands. Companies, too, are responsible for consulting with First Nations on developments that take place on land that is the subject of a First Nation's land claim. This duty to consult is not limited to land to which aboriginal title has been proven, but to land that is the subject of a claim to title. However, the strength of duty to consult is directly related to the strength of claim to title. For example, a First Nations band that has strong archaeological evidence of past occupation will have a correspondingly strong claim to title.

It is important to note that advisory groups are not the same as consultations. Consultations are normally carried out by government officials who canvas various views separately and then give them consideration in an internal government decision-making process. Advisory groups, on the other hand, involve the stakeholders and interest groups working through their differences themselves and coming up with positions and recommendations on which they agree or identify their points of disagreement. In the process, the participants provide advice that has been given thorough consideration from different points of view and reflects their compromises and adaptations.

The use of advisory processes is a necessity -- no longer an option -- for governments in dealing with many issues. It is not meant to replace the ultimate decision-making authority of governments, but is to enable consensus to be reached among disparate groups in society.

2.3 Challenges

The creation of a Salmon Aquaculture Forum requires a deliberate and comprehensive plan. The failures of other advisory processes related to fisheries and aquaculture demonstrate the need for the Forum's structure and procedures to be carefully crafted.

It is often assumed that the political parties, legislative processes and government institutions would naturally address controversial issues as they arise, and enable them to be resolved. The notion of politics, whether partisan or otherwise, is that it is an exercise of authority that enables problems to be considered and interests to be reconciled. For salmon aquaculture, as an example, the institutional structures of government have, at least so far, failed to help clarify or resolve the controversies. An advisory group can be a valuable instrument to address divisive issues and lead to effective solutions before they become entrenched in partisan politics.

At the same time, it should be noted that advisory groups in Canada often fail in many respects. For example, most of the participants from outside government eventually become dissatisfied and frustrated from their experience in advisory groups, especially from the outcomes in terms of their minimal influence on government policies and decisions. In most cases, senior government officials are unwilling at the outset to give firm commitments to respond positively to advisory group recommendations or, afterwards, to acknowledge why any advice was rejected or overlooked.

Advisory groups are created and operate mainly on an ad hoc basis in Canada. They are often established with little thought about how they should work, beyond vague notions about their purpose. They tend to be managed by public servants and consultants who are subject-matter experts and lack the experience, operational guidelines, training, clear mandates, and accountability necessary for them to work effectively. Consequently, many advisory groups are poorly planned, have imbalanced representation, and suffer from unrealistic expectations of the participants.

Unlike most other countries where public advisory groups are integrated into government decision-making and given a degree of status, Canada lacks any tangible legislative or operational basis for its advisory groups.

Neither the Government of Canada nor any of the provinces can currently provide a full list of their advisory groups. They do not even count them; they fail to establish codes of practice, state their operating principles, or apply performance standards. Given the lack of public sector managerial attention or guidance to advisory groups in Canada, it is not surprising that they so often fail to satisfy the needs and expectations of their government sponsors or their citizen participants.

Realizing the potential problems in light of past experience and the shortcomings of other advisory groups, Ministers Hagen, van Dongen and Thibault asked for a detailed proposal that would provide a solid organizational and procedural basis for the Salmon Aquaculture Forum to proceed with public confidence about its integrity, sustainability and effectiveness.

3. AQUACULTURE EXPERIENCE

This section of the discussion paper provides observations on the nature of the recent and current controversy regarding salmon aquaculture, and provides descriptions of various initiatives, organizations, milestones and events. It also provides observations on the context for the current state of the aquaculture debates. It cites the experience of organizations and policy discussions about aquaculture elsewhere in the world that can serve as reference points and provide lessons for British Columbia.

3.1 Tactics and Strategies

The public controversy has arisen as a result of several factors. Neither the aquaculture industry nor governments were prepared for what became a matter of intense public scrutiny, anxiety and arguments.

Over time, several environmental, labour and community organizations began to oppose salmon aquaculture development, on the basis of a widening list of factors. It is easy in retrospect to criticize the tactics and arguments that were adopted by each side. The position taken by some in the industry of innocent-until-proven-guilty or invoking the Scottish verdict of guilt "not proven" has not been impressive. Nor was the selective representation of "science" cited by some environmental and consumer groups as their evidence that the industry should be shut down. In their enthusiasm and eagerness to make their case, both sides slide at times into positions that caused the public to question their credibility. The situation led British Columbians to take sides on an emotional basis instead of reaching conclusions related to informed discussion or evidence.

Public anxiety about salmon aquaculture in British Columbia seems to be associated with the sheer number of points of controversy that have made the debate extremely complex and difficult to address. For example, among the issues that have arisen are: health effects of food colouring; conversion of other fish for salmon feed; lighting in salmon pens; PCB and dioxin levels; escapes of farmed salmon; disease, sea lice and parasite transfers between wild and farmed salmon; effects of antibiotics (therapeutants) on other marine species; human health effects from consumption; predator (sea lions, birds, seals) management practices; waste build-up in sewage and pollutants; disposal of dead farmed fish; visual impacts on eco-tourism; community economic value; fish farms effects on wild salmon prices and fishing; aquaculture effects on aboriginal and treaty issues; zoning and farm site effects on other species and wildlife; and, willingness of governments to enforce environmental laws. From week to week, one or another of these issues has been highlighted in the news media and radio talk shows, but never resolved before moving on to the next issue.

This partial menu of issues is not meant to illustrate a failure by the industry or governments to take effective action to address them. It is meant to illustrate that the public concern about salmon aquaculture appears to be related to more than just one or two points, and that there will be no quick-fix to change public attitudes about the industry. For instance, the adoption of land-based, closed containment systems would be significant and costly, but would address only some of the points of controversy listed above. Not surprisingly, aquaculture companies are reluctant to commit to such changes in their ways of doing business if they are likely to face continuing opposition and unrelenting demands for other changes.

The salmon aquaculture debate has been largely one of environmental groups applying pressure and the industry on the defensive. For instance, in mid-2002, the Coastal Alliance for Aquaculture Reform initiated its markets campaign aimed at applying economic pressure on the BC salmon aquaculture industry by encouraging

restaurants to refuse to serve farmed salmon. They initiated the markets campaign because they felt that they had no remedy through established channels to influence the salmon aquaculture industry or persuade governments to take regulatory action to force changes in fish farm practices.

On another front, in early 2003, environmental groups joined with some First Nations communities to launch a lawsuit against aquaculture companies and the governments of Canada and British Columbia, alleging that the governments breached their constitutional duty to protect aboriginal rights by promoting the aquaculture industry at the expense of First Nations rights, wild fish and the environment.

As the lawsuit and much of the debate about salmon aquaculture demonstrates, the public anxiety is related to a fear that governments may not be doing their duty, not simply that the industry is failing to respond. The federal and provincial governments have roles as both regulators and promoters of salmon aquaculture, with some consequent confusion about which of those dual, and apparently contradictory, functions takes priority.

The belief and suspicion by some that governments are failing to regulate aquaculture sufficiently have led to a persistent demand for information to be made public by the salmon farmers about their activities. Not trusting governments to oversee the industry diligently, some environmental groups and First Nations have called for extensive public disclosure of fish farm information to find out whether or not sustainable practices are being followed.

By contrast, there is no equivalent demand for data and information from regulators and regulated industries in other sectors. Where independent government-mandated regulators are seen to be carrying out clear and unambiguous enforcement and education, such as in occupational health and safety or the BC Centres for Disease Control, there is public trust in the process.

The aquaculture industry may very well be adhering to all legal requirements and sustainable practices, but the lack of public confidence in the government regulators is causing apprehension and leading to the demands for information disclosure by the companies.

This same concern about regulatory integrity appears to be a significant factor in the "zero tolerance" position of some First Nations and the demand for "exclusion zones" for some areas. In both cases, these stances have been taken at least partly because of the fear that governments are unwilling or unable to minimize or prevent related risks to wild fish stocks and the environment.

In some respects, advocacy groups are placing unfair demands on the salmon farmers to make information public that is commercially sensitive and is already provided to the governments. Their attention should be re-directed towards the federal and provincial governments that should be making a more concerted effort to demonstrate that they are acting on the information that is provided to them and proving the integrity of their regulatory responsibilities.

3.2 Context of Issues and Initiatives

Several government initiatives in Canada and elsewhere were taken to provide advice and, in some cases, to develop consensus about proposals for salmon aquaculture development.

A brief review of the organizations and initiatives provides an understanding of the context of the current situation.

Ministers' Aquaculture Industry Advisory Committee

The rapid growth and then collapse of British Columbia's salmon farming industry in the 1980's led to the declaration of a

moratorium on expansion and the provincial government's establishment of the Gillespie Commission of Inquiry to consider the circumstances. In line with the Commissioner's recommendation, a group of fifteen stakeholders, including industry and First Nations representation, was asked to serve on a Ministers' Aquaculture Industry Advisory Committee to suggest how the industry could proceed in an orderly way into the future. This Committee existed from 1987 until 1993 when it was disbanded.

Office of the Aquaculture Commissioner

In December 1998, the Office of the Commissioner for Aquaculture Development was established to:

...bring together all appropriate federal government resources, lead required regulatory reforms and work with the provinces to develop a vibrant, environmentally sensitive aquaculture industry.

The Commissioner was assigned an advisory function for the federal role in research, technology transfer, training and development, access to financing, and environmental sustainability. In the words of Fisheries Minister David Anderson:

The Commissioner for Aquaculture Development is not just an advisor, he is an advocate for aquaculture development within the federal government and across the country.

His task was further defined as implementing the federal government strategy to advance aquaculture in a manner that complements traditional, recreational and Native fisheries and is consistent with federal responsibilities for public health and the environment.

Salmon Aquaculture Review

Beginning in July 1995, the BC Government initiated a two-year research project that resulted in an exhaustive five-volume report entitled the Salmon Aquaculture Review. Led by the Environmental Assessment Office, the project was given the mandate to consider the environmental risks associated with salmon farming and evaluate the adequacy of the methods and processes to prevent or reduce adverse effects, as well as socio-economic considerations.

The Salmon Aquaculture Review report is a useful and extensive reference for anyone wishing to consider the many dimensions of aquaculture activities in British Columbia and elsewhere. The Review involved a Technical Advisory Team that included experts, stakeholders and the public. It also had a forty-five-person Review Committee with wide representation to provide input and comment on findings.

The Salmon Aquaculture Review took a global perspective. It concluded that the overall risk to the environment from salmon farming was low, given the levels of fish farm activity at that time, but caution would need to be exercised to ensure sustainable development. It pointed to the need to adopt a comprehensive code to describe best practices in aquaculture, as well as processes to deal with the public complaints, questions and disputes that would inevitably arise.

As comprehensive as it was, the Salmon Aquaculture Review did not address in sufficient detail some of the contentious topics that have subsequently arisen. For instance, it did not deal with sea lice and any related risks of wild and farmed salmon interaction. It did, however, point out that there was a strong public expectation that more scientific research should be directed towards the risks that salmon farming could pose to wild stocks, regardless of the technical evaluations that showed that such risks seemed to be low.

The Salmon Aquaculture Review had been an exceptionally valuable environmental assessment tool, but did not provide a way for complex ecological and business issues of aquaculture to be discussed or establish a basis for consensus. One key recommendation of the Review to address this situation was to establish another ministerial advisory body to:

...provide advice on the development of policy, monitor its implementation, recommend research priorities, and provide a forum for dialogue and information exchange.

Salmon Aquaculture Implementation Advisory Committee

The BC Government established the multi-stakeholder Salmon Aquaculture Implementation Advisory Committee in February 2000. Its stated goal was the *...successful implementation of Cabinet's decision regarding British Columbia's Salmon Aquaculture Policy Framework through the benefit of a broad diversity of thought, knowledge, experience and information.*

In October 2001, the Committee demonstrated some progress by producing the description of "A Vision for Salmon Aquaculture in British Columbia" that described goals, objectives, strategies and performance measures. At the same time, environmental members felt that they were not being consulted before significant government decisions were made, and were refused access to important information.

The organizers and participants in the Committee had considerably different expectations of what was to be achieved and how they would proceed. This dissonance was due, in part, to the appointment process that was taken by some members to suggest that they were there to carry the agenda of the organizations they represented and to serve as lobbyists within the Committee for the views and positions of those organizations. The stakeholders who participated in the Committee were not highly invested in the process. Government officials chaired the Committee, set the agenda and were seen by some to be excessively controlling the process.

The composition of the Committee was an immediate problem, due to what some members perceived to be an imbalance in favor of industry representation and insufficient participation of First Nations and environmental groups. The Committee was eventually increased to 18 members -- an unwieldy number that did not readily permit free-flowing discussion.

While the Committee and its processes have been bitterly criticized by many stakeholders, its problems seemed to arise primarily from fundamental misunderstandings about its purpose and by the effort of government officials to focus on technical and process issues instead of the broader questions of government policy, governance and specific information about salmon aquaculture farms and their practices. The members representing environmental, labour and First Nations groups resigned in February 2002 in protest over the BC Government's handling of the decision to lift the moratorium on new salmon farm applications, and the Committee was shelved.

British Columbia Aquaculture Research and Development Committee

The Science Council of British Columbia has served since Spring 2001 as the home for the British Columbia Aquaculture Research and Development Committee. The BC Government set up the committee to: *...encourage independent research to foster sustainable aquaculture industry in British Columbia in conjunction with the stewardship of aquatic resources.*

The committee has a specific mandate to identify priorities and serve as a source of information on aquaculture, and it has been provided with the Aquaculture E-Fund to sponsor research projects on the environmental aspects of finfish and shellfish aquaculture. Membership on the Committee has evolved recently to include individuals from government, industry and environmental groups.

Aquaculture Science Agenda

Several recent initiatives in addition to those of the Science Council have been taken to address the knowledge gaps regarding biological and environmental conditions related to salmon aquaculture. The Government of British Columbia, University of British Columbia Centre for Aquaculture

and the Environment, and AquaNet (Canada's Research Network in Aquaculture) have combined their efforts to sponsor events such as the February 2003 Science Forum on Sea Lice, a workshop that included stakeholder representation and attempted to determine what new scientific studies are required. More recently, AquaNet sponsored a July 2003 meeting of scientists on the integration of science and policy-making in finfish and shellfish aquaculture. Other workshops, such as those sponsored by Simon Fraser University, have included aquaculture science issues in their agendas.

First Nations Aquaculture Initiatives

The significance of aquaculture to First Nations has been illustrated by the extensive work of the BC Aboriginal Fisheries Commission to encourage discussion and dialogue and to enable communities to become more informed and involved in decisions about aquaculture development. The Commission took an innovative approach by organizing the September 2002 Fish Farming and Environment Summit to consider the potential economic and environmental implications of an expanded farming industry. While the Summit did not lead to agreement among the participants on possible positions, it was one of the rare occasions when industry, government officials, environmentalists and First Nations leaders were able engage in a moderated and productive, but brief, dialogue.

A further aquaculture initiative by the BC Aboriginal Fisheries Commission was the mid-2003 workshop to identify how First Nations could be more effectively involved in environmental monitoring of fish farms and work with industry and governments to integrate scientific and traditional ecological knowledge. This workshop is expected to lead to a demonstration project that will provide an innovative template and environmental indicators for First Nations in aquaculture monitoring.

Scotland's Experience

In many respects, the Scots have a contentious and confrontational atmosphere in their consideration of salmon aquaculture. The strong tone in the rhetoric and opposition to aquaculture by some Scottish environmental groups is considered to be a function of the support shown for the industry's expansion by the Scottish Executive, the national government. The environmentalists, it is argued, believe that they must take a no-holds-barred position in each case because the government officials will not otherwise take sufficient notice.

The Scottish Executive carried out a review last year by a ministerial working group leading to the production of its report entitled the *Strategic Framework for Aquaculture*. That report covered much of the same ground on issues as British Columbia's Salmon Aquaculture Review had done several years before, and produced a valuable reference document. However, the process involved several stakeholders in the panel, including naturalist and recreation groups, but with only one wild salmon and one environmental representative among the twenty-nine members. While the views of all organizations were solicited throughout the report-development process, the advisory membership lacked balance in its composition. It also lacked transparency in the absence of public records of discussions and decisions.

Public discussion of the aquaculture industry has also been directed through government processes such as the 2001 consultation on the "Review of Regulations Governing Aquaculture in Scotland" and technical groups such as the Industry/Science Partnership, Tripartite Working Group, and Aquaculture Health Joint Working Group. The current Royal Commission on Environmental Pollution is also providing a focal point for public attention and stakeholder submissions on aquaculture.

Still, the ferocity of the aquaculture debates in Scotland seems, like British Columbia's,

to be exacerbated by the lack of any process for actual dialogue between the industry and environmental proponents without government or the news media acting as go-betweens.

Ireland's Experience

The Irish Government has used an array of advisory groups to provide public information and discussion opportunities that bring together government and industry officials and others involved in aquaculture. In many cases, these are representatives of several government departments, each with aquaculture regulatory or oversight responsibilities. Information on their deliberations and decisions is provided to an array of designated stakeholders who are considered important for consultation purposes. Advisory groups on fish and shellfish health and an Aquaculture Liaison Forum are comprised mainly of industry and government members, but include researchers.

Norway's Experience

The debates over aquaculture issues in Norway take place on many of the same issues of escapes and sea lice impacts, but they tend to be less confrontational and emotional. In Norway, the environmental advocates and aquaculture industry officials established their direct relationships and dialogue several years ago, and proceed on the basis of seeking incremental improvements to reduce pollution and improve the industry's performance. These relationships and informal contacts are crucial to build the understanding that seems to have developed about one another's perspectives. Consequently, the public debates in Norway rarely involve the personal attacks and criticism of motives that characterize the arguments about salmon aquaculture elsewhere.

Government regulators in Norway are generally seen as being relatively strict enforcers of environmental standards. Environmental groups carry out monitoring of information that is made public about escapes and other trends, and urge enforcement in response.

The Parliament in Norway created exclusion zones in 1989 for some areas where fish farming is not permitted. This requirement is being reconsidered from the combined perspectives of economic and environmental requirements, involving a re-evaluation of these "national salmon fjords". A selection process is underway that involves assessments of the currently excluded areas and priority-setting to identify where the ban should be continued or lifted.

In the view of some observers, the decision of environmentalists in Norway to take a more conciliatory and constructive strategy was due to the sheer size that the aquaculture industry had reached by the mid-1990s, and the futility of a traditional protest approach. Another factor is that its industry has moved from the growth phase into consolidation.

Washington State Experience

The salmon aquaculture industry in the State of Washington is relatively small, and has not been the source of extensive public attention or controversy. There are eight finfish aquaculture sites, all with the same owner, mainly producing Atlantic salmon. The focus of the state's regulatory control program has been on preventing escapes and expressing a low tolerance for risks related to escapes. A highly visible and comprehensive regulatory regime has been put into place, having been designed in cooperation with Aboriginal groups. Both federal and state regulators are involved in the licensing and oversight of Washington fish farms. The state has adopted many of the same restrictions and prohibitions as those of British Columbia on matters such as transgenic salmon.

State of Maine Experience

Salmon aquaculture has existed in Maine for more than twenty years, and is facing a strong polarization of public opinion about its costs and benefits. Several legal battles in

the state during the past two years have given fish farms a high public profile and may profoundly affect their future there.

The State Legislature this year established a task force that was assigned the mission of identifying what role salmon and shellfish aquaculture should play in the future. The members come from backgrounds in fisheries, government and academia, but none have been directly or personally involved in the recent environmental and economic debates on aquaculture. A second group of industry and environmental interest group representatives was asked to assist the Task Force, but their role will be limited to providing information.

The Task Force will establish its vision for aquaculture in Maine, along with policy recommendations on lease locations, environmental issues and state regulations, by the end of this year.

3.3 Lessons for the Forum

The experience of aquaculture organizations and recent initiatives in British Columbia and elsewhere shows that there is hope for progress to be made. The various aquaculture-related organizations and initiatives have illustrated the need for the Salmon Aquaculture Forum to be carefully fashioned and pursue an ambitious, but achievable, agenda.

It should be understood that, for all of the parallels that have been drawn with the British Columbia forest industry's experience, the public policy issues in salmon aquaculture are far more complex and difficult to resolve. The aquaculture debate covers the gamut of human and animal health, environmental, economic, biological, food quality, food chain, and community development issues, to name just a few. The resolution of the issues in aquaculture should be expected to be far more challenging and time-consuming than it was in the forest sector, but no less crucial for everyone's sake.

The experience of others also shows that any significant progress towards dealing effectively with salmon aquaculture issues depends on the industry and environmental groups themselves. The role of government in contributing to the progress of the Forum will be crucial, but the success or failure will come down to the willingness of the non-governmental participants to seek common solutions and share responsibility for moving forward.

Unlike aquaculture issues in Europe, the process of addressing them in British Columbia will involve First Nations in terms of their essential role in aspects of governance, their contribution of traditional ecological knowledge, and their aboriginal rights. The debates about the pros and cons of salmon aquaculture take place in First Nations communities as they do in other parts of society, and wise and informed decisions about aquaculture's future will be crucial for all of them. First Nations, living with nature and depending on the fisheries, have the most to lose by mistakes in aquaculture development. They need to participate fully in the decisions that will affect them.

Perhaps the most important condition that should exist for the Forum to succeed is for everyone to focus on the cause of the apparent problems, instead of merely assigning blame. The recognition of their causal factors should replace the unproductive trading of accusations by all sides. For this to happen, a change of attitude by the participants towards one another will have to be fostered.

4. VIEWPOINTS AND FINDINGS

This section summarizes the views expressed by stakeholders in the extensive discussions and meetings that took place during the Summer of 2003. As was mentioned earlier, the comments are presented on a non-attribution basis, and are listed in a way that attempts to provide a fair compilation of the opinions that were conveyed. In a few instances, the views of some are inconsistent with others, but are mentioned in order to provide a flavour of the range of suggestions that were made.

Everyone involved in the process supported the basic intent of the Salmon Aquaculture Forum, although many did so with some caution attached. Some suggested that there could be conditional acceptance, related to other stakeholders showing good faith before any endorsement would be given. No one in the discussions called for an end to salmon farming; no one claimed to have gained anything from the fighting that has characterized the debate recently.

The following comments are those that were expressed in the dozens of discussions with hundreds of individuals. They have been categorized to provide some semblance of order, but have been assembled on the basis of their relevance to the Forum's possible structure and activities. The selection of some of the comments and the failure to include some others undoubtedly reflects some degree of bias, but every attempt was made to depict the full range of opinions and advice.

4.1 Defining Purpose

- Long-term problems and solutions should be the focus, not immediate crisis issues such as the Broughton Archipelago that would only touch-off heated arguments.
- The establishment of a partnership and joint solutions by the participants should be the goal, not merely declaring peace as the absence of war.
- There should be no truce required; if the Forum succeeds it will have to do so by getting the stakeholders to the point where new developments would not be an environmental threat and the markets campaign would be unnecessary.
- Consensus is possible, but the Forum may not be achieving any significant degree of agreement, given the difficulty of any negotiation process and polarity of the positions already taken.
- The Forum members should seek agreement on facts as a matter of priority, then start addressing the issues and possible action.
- It should not have peace-making as its main objective; it should encourage frank and honest discussion in a respectful and constructive atmosphere.
- Providing practical advice to the governments should be the ultimate goal.
- The main valuable outcome would be to create some common understanding of the problems, which ones are real, and which ones should be the priorities to discuss and seek solutions.
- It has to have both environmental and economic sustainability as its objective.
- The focus must be on salmon, not other species.
- The Forum should consider all BC aquaculture, since the companies are moving into other species and this needs consideration before the mistakes of salmon are repeated.
- The main attention should be on wild fish impacts.
- Credible information about what's happening and public assurance that someone is concerned about improving salmon aquaculture are the two primary results to achieve.
- The Forum should coalesce the debate and explore options for industry to take practical action.
- It should seek consensus but not be bound by lack of total agreement.
- The Forum must serve as a reliable and accurate information source.

4.2 Creating Expectations

- Whatever the Forum does, it will not be the total solution.

- Seek achievable and practical solutions, not changing personal values of the people involved in it.
- Everyone has to get beyond simply taking official positions, and consider how to be creative in getting new ideas and different solutions.
- Frank discussion is essential, but the tone of discussion has to be set in positive ways.
- There has to be value to everyone who participates.
- Any effort to establish a vision of the industry for the future will be difficult, since it does not currently exist within the industry.
- One of the first activities should be to articulate what would constitute positive results in measurable terms.
- Find solutions that governments can implement and the companies can realistically adopt.
- Seek cooperation and mutual accountability, and operate as though everyone involved is working towards the public good.

4.3 Adopting Attitudes

- An attitude adjustment is difficult, but will be crucial for participation.
- There is deep mistrust to overcome, as well as assumptions about others' motives and tactics.
- Acknowledgement of the legitimacy of opposing points of view, not denial, should be encouraged.
- Recognition of both environmental and economic issues will require environmental advocates to discuss effects on communities and jobs, and industry to acknowledge risk issues and the value of learning from experience.
- Enable everyone to become comfortable in their participation and maximize their contributions.
- Exercise moral authority where marginal and intransigent stakeholders attempt to undermine the Forum's work.
- Recognize that strong views often come from lack of knowledge and the pursuit of other agendas, rather than informed debate.
- Governments must prove their willingness to consider the Forum's advice and respond in timely and positive ways.

4.4 Setting Scope

- Establish a reasonable scale of activity; don't overbuild the Forum by expecting it to solve every issue immediately.
- Initial attention should be paid to dealing with the confusion over the regulatory regimes and responsibilities of the federal and provincial governments; this is a task that everyone wants to see addressed.
- The government officials should stay out of the process of setting the Forum agenda, and concentrate on providing support and acting as a conduit to senior government decision-makers.
- The Forum should be primarily advisory, not regulatory or decision-making in place of government.
- Whatever criteria is set to measure the Forum's success and failure, there should be a report card to the public to ensure accountability.

4.5 Public Participation

- There is a virtually unanimous commitment to draw everyone into a process to work in a more constructive way than trading accusations.
- Dialogue needs to start, and personal rapport will have to precede the attention to issues that might lead to resolution of some controversial points.
- Mutual value from participation has to be made apparent to everyone, including the government officials who are not in control of the process.
- Involvement has to extend to more than the "usual suspects" and official spokespersons, so that there is public interest representation.
- Participation must be from different regions and backgrounds, not just Vancouver or Victoria.

4.6 Stakeholder Participation

- Identify the needs of key players who will be involved, instead of the details of the positions they advocate, so that the

consensus effort can be on win-win solutions.

- There will be initial awkwardness and anxiety in dealing face-to-face with long-time opponents.
- The initial stages of the Forum should present opportunities for participants to show good faith and their willingness to engage in meaningful dialogue, including an opportunity for the industry to showcase their best practices and environmental activities.
- Everyone may have to recognize the possible refusal of some potential participants to become sincerely or even nominally involved.

4.7 Aboriginal Participation

- There should be full participation of First Nations leaders, recognizing the unique nature of their interests, perspectives and values in the process.
- The BC Aboriginal Fisheries Commission should be encouraged to continue building a basis of agreement among First Nations, in addition to Forum participation.
- Traditional ecological knowledge should be brought into evaluations and decisions on sites and other crucial activities, in addition to its use in the consideration of policies.
- The supremacy of environmental integrity is a tenet of aboriginal views, and should be assigned a high value in the Forum's consideration of any aquaculture policy.
- First Nations should be treated as a level of government, not just as participants or stakeholders in their representation in the Forum, and their regulatory role and involvement with other governing structures should be recognized.
- Treaty negotiation processes may affect the willingness of some First Nations to participate, and they would not endorse a flawed process that would fail to be fully inclusive.
- The lack of a Forum until now was one reason why legal remedies had to be pursued.
- First Nations communities are split in their views on aquaculture, but are willing to pursue dialogue that can lead to more informed participatory decisions.
- The willingness of the federal and provincial governments to pay attention to the Forum is crucial, and their commitment to listen and act must be clear from the outset.
- The Forum should look at the inherent problem in how First Nations entitlement and rights can be addressed in sites and partnership decisions at the local level.

4.8 Leadership

- The first task should be to establish relationships and rapport.
- Don't rely on referees or miracle workers, but engage in facilitated discussions.
- The onus should be on the participants in the Forum to take ownership of the process and work cooperatively.
- Whoever is asked to chair or facilitate the Forum should be recognized, respected and widely acceptable.
- The involvement of the PFRCC should continue into the operational stage of the Forum.
- The leaders have to focus initially on establishing processes and ground rules and encouraging personal relationships, and then move to handling the issues.

4.9 Membership

- There should be a personal profile of skills, perspectives, and qualities for each of the members, and an overall balance of backgrounds and experience at the table.
- Members of the Forum should have ownership of the process and responsibilities for the outcomes.
- The public good should be their primary concern.
- There should be a small number of members to permit productive dialogue.
- It should be inclusive and representative in ways other than the members, perhaps involving different levels of participation.
- They should serve as individuals, not as delegates of stakeholder organizations; there are too many different interests involved to permit appointees of all organizations.
- Government participation should be in passive forms such as ex-officio membership.

- The characteristics of members should include willingness to listen, reasonableness, respect by all sides, and ability to sell agreements and recommendations.

4.10 Form and Structure

- Independence from government and vested interests is crucial, as well as its willingness to provide criticism whenever it is needed.
- It should be transparent in its activities, decisions and advice, ensuring public access and being accountable for its work.
- Given the dual jurisdiction of aquaculture, the Forum should report to ministers of both senior governments.
- A mechanism is needed to ensure full representation of interests and views, and a fair appointment process that establishes a balanced membership composition.

4.11 Operational Information

- Public access to information about salmon farm activities and data was a matter of considerable contention in past aquaculture advisory initiatives.
- The Forum should encourage the public release of as much information as possible by the salmon farmers to help inform the public and provide a basis for people to evaluate performance and assess risks.
- Data sharing agreements, such as those used in the forest industry are being introduced in aquaculture and may preclude the need for the Forum to be concerned with information needs.
- The Forum should look at whether or not there are gaps or overlaps in reporting requirements and government regulation, including those that have affected completion of environmental assessments.
- The public does not know who to believe about some aquaculture situations, so the Forum could serve as a definitive source of knowledge with quality information.

4.12 Procedures

- The rules of engagement will be important, and should not be the same ones (such as representatives named by the interest groups) as have been used in the fisheries.
- The Forum organization must be sustainable and credible, so it must start out able to satisfy the needs of stakeholders to participate in positive ways.
- Encourage frank discussions of issues, and validation or set-aside of positions and facts.
- Base the process on respect and value the skill of listening.
- Get the Forum underway immediately.
- Establish working relationships, then information sharing, then begin seeking joint solutions.
- Ensure absolute clarity and shared understanding of the purpose and procedures.
- Set up protocols to ensure fully inclusive participation.
- Take time to build the organizational and relationship basis of the Forum and ensure continuity.

4.13 Local Processes

- If the Forum is going to work at the policy and broad consensus level, processes and community review committees should be established at the regional and local levels to enable public involvement in specific aquaculture activities and decisions, such as siteing, marine ecology assessments and monitoring of aquaculture impacts.
- The involvement of First Nations in monitoring should enable them to build expertise and gain more direct understanding of aquaculture practices.
- Local involvement in aquaculture should be at the watershed and area management levels, so communities can have a say in the design and evaluation and possibly licensing of aquaculture development in proximity to them.
- Several regional organizations exist and are interested in taking on the task of participation in aquaculture decisions.
- Demonstration projects to establish a template for community development in aquaculture should be instituted, using the initial suggestions for local review committees contained in the Salmon Aquaculture Review.

4.14 Issues

- The wide and complex array of health, food quality, community, environmental, economic and technology issues in aquaculture are not the same as those in the fisheries; they require a different approach to their discussion and consensus-building.
- The issues list set out in the Salmon Aquaculture Review should be the basis for environmental assessments and Forum discussions.
- There is a lack of scientific work underway that addresses the most immediate problems and controversial issues.
- The Forum must deal with the uncertainty about the industry's future being caused by the current arrangements for federal environmental assessments.
- There are technology solutions to some of the pressing problems that should be investigated by the Forum; the industry needs to continue investing in innovation to deal with environmental concerns as well as improve productivity.
- The impression to the public is that there is a flawed and confused regulatory system with unclear enforcement criteria, leading to a lack of public confidence in the oversight of aquaculture.
- Several sources of problems apart from aquaculture may be affecting wild salmon, and research should be directed towards those impacts.
- Fish farms should be encouraged to get involved in sponsoring projects to restore streams and revive wild stocks, to demonstrate their environmental concern.
- The possible establishment of exclusion zones should be on the Forum agenda.
- The Forum should acknowledge and consider the differences in public perceptions of safety and product quality, and use risk assessment as a basis for building consensus.

4.15 Values

- The sides in the aquaculture debate seem to have fundamentally different views of the world, and it is a problem to reconcile such disparate outlooks about the fit between man and nature, and co-existence versus conquering.
- There are common values in terms of everyone in the debates wanting economic and environmental sustainability, minimum footprint, and community benefits, but some participants refuse to acknowledge the goodwill of their opponents.
- Part of the dispute is about money, with one side accused of being funded by wealthy foreign corporations and the other of being sponsored by wealthy foreign charitable foundations.
- The sides seem to be overselling aquaculture's benefits and overstating its detriments.
- The industry is expected to demonstrate its economic value at the same time as it explains how it prevents harm.
- Contrasts of values are expressed in the different risk assessments and tolerances of stakeholders; there are different bases of risk assessment even when there is agreement on facts.
- There has been an unfortunate tone in the arguments about aquaculture, unrelated to rational considerations, with an accompanying intolerance and dismissiveness by some about anyone holding views that differ from their own.
- A goal should be public involvement and an extension of activity for First Nations beyond simply consultation, and this should extend to include co-management.

4.16 Support and Staffing

- Several organizations and advisory processes are going ahead in area and watershed management, and the Forum should be making use of them.
- Locate it away from the urban centres to ensure regional involvement.
- Operate it on a virtual basis, to the extent possible, so that it can be accessible to the public and make information about aquaculture readily available.
- Use professional, unbiased staff, not managed by government officials.
- Build effective communications links among the participants and with the public.
- Enable the Forum to travel and hold regional meetings.

4.17 Science and Technical Input

- There should be a science focus for its work, and independent sources of expertise about salmon aquaculture practices, environmental options, community impacts and market issues.
- There should be a combination of traditional ecological knowledge and scientific approaches, not be weighted or biased towards science or have only token acknowledgement of aboriginal chronicles.
- Science is important, but does not normally offer definitive evidence or solutions; anecdotal evidence should be valued in conjunction with scientific methodology.
- The Forum should use technical support to provide information and data inputs, but not create a separate science panel that would duplicate the effort of others.
- Much of what is presented as being aquaculture science is outdated information; the data and findings of the Salmon Aquaculture Review should be updated, and emerging issues like sea lice should be incorporated into it.
- There have been several questionable studies, as well as allegations based on unsubstantiated claims that should be subject to independent scrutiny by the Forum.
- The BC Aquaculture Research & Development Committee is in transition to include a balance among stakeholders and interests, and is looking at its science sponsorship from a combination of economic, environmental and community perspectives.
- Only a relatively small portion of Canada's government-funded aquaculture research appears to be directed towards informing the current public issues, and research proposals by First Nations have not been supported.
- There has been a very gradual creation of coherence in the aquaculture science agenda.
- The Forum should draw from best scientific and specialized technical resources, rather than establish a staff that would not have the breadth of expertise that will be needed.

4.18 Funding

- Only governments can provide a sufficient level of long-term commitments to permit the Forum to achieve anything tangible.
- There should be joint funding by the federal and BC governments, not by just one of them.
- The Forum will need up to three years to reach its stride and demonstrate its full value, based on the experience of other advisory bodies.
- If the Forum had to rely on industry funding, it would not have enough resources and could be seen as adopting a bias.
- There should be some funds made available to encourage public participation, especially to support the involvement by some community and First Nations participants.

As was mentioned earlier, the points listed above are views expressed by the participants in the discussions that were held during the past three months. They reflect the personal judgments of several individuals, all of whom demonstrated sincerity in wanting the Salmon Aquaculture Forum to succeed. Their input included some remarkable insights that are serving as the basis for what will be recommended in the ***Briefing Note to Ministers*** on the Forum's organization, participation and activities.

The comments that were provided demonstrate the considerable challenges in establishing dialogue, enabling public understanding, building trust, and reconciling values. They also displayed the commitment and willingness of stakeholders and First Nations to cooperate.

5. Best Practices and Models

The mandate assigned by the federal and British Columbia fisheries ministers included a request to look at the practices of other advisory organizations and systems to see how the Salmon Aquaculture Forum could learn from their experience and adopt procedures and other elements that have proven to be successful. More than forty advisory organizations, institutions and initiatives were investigated, and thirteen of those were selected to be described in this chapter. Each of them provides some best practice examples or learning opportunities based on their experience. Some of them also offer lessons and warnings based on their failures and mistakes.

While the organizations described here are predominantly advisory, they were selected in many cases on the basis of their role in building consensus in the process of developing their advice and recommendations. This criterion of consensus-building was selected because the challenges of achieving agreement among the aquaculture stakeholders were constantly cited in the discussion with stakeholders about how the Forum should be made to work effectively.

Each exemplifies characteristics related to one or more of: structure; membership criteria; selection; management; aboriginal involvement; leadership; balance of interests and backgrounds; joint solutions procedures; consensus-seeking; state-of-debate reporting; training; objectives and goal definition; public involvement; relationships with government; personal rapport among participants; administration; staffing; and operational ground rules.

Also included in this chapter are references to the legislative frameworks and operational guidelines employed by governments outside Canada that make their advisory group processes more consistent, accountable, and effective.

5.1 West Coast of Vancouver Island Aquatic Management Board

In 2001, governments agreed to establish a new organization for individuals and organizations to participate in the integrated management of the aquatic resources of Vancouver Island. Introduced as a three-year pilot project, it was to serve as an advisory body to:

...develop and implement innovative, balanced and practical solutions to aquatic management challenges in areas of fisheries and integrated oceans management, stewardship, aquaculture and community economic development.

The West Coast of Vancouver Island Aquatic Management Board has eight government representatives (two each from federal, provincial, local and Nuu-chah-nulth governments) and eight others. The members were chosen from a group of applicants based on their merits, broad base of support, and in line with an overall balance in the membership. Those interests and backgrounds could include: commercial, Aboriginal or recreational harvesting; processing; environmental and stewardship perspectives; aquaculture; tourism; and labour.

The plan to establish and implement the Board was very carefully formed to ensure that it pursued its agenda and activities only after establishing a clear understanding of the values shared by all of the members. The Board concentrated in its initial stage in building a rapport and sense of common purpose among the members, and this has been a crucial factor in the subsequent initiatives and consensus-establishment process.

The Board represents an initial, and perhaps unique, success in its sponsorship based on cooperation by the four levels of government. Its deliberate selection of membership was innovative, and its consensus-development procedures also offer a valuable template for the Forum.

5.2 Pacific Fisheries Resource Conservation Council

Established in 1998, the Pacific Fisheries Resource Conservation Council advises the federal and BC fisheries ministers about the status of salmon stocks and habitat. It has provided a valuable public information service, acknowledged both governments for several valuable fish conservation programs and projects, and offered timely advice where there have been shortcomings and problems that put salmon stocks at risk. By reporting to both levels of government the Council can address the gaps and crucial problems that exist where there is both federal and provincial jurisdiction.

While the Council was supposed to be jointly sponsored by both governments under a federal-provincial agreement, the BC Government has, to date, not provided its share of funding. The Council's experience provides a vivid example of the difficulty of the two levels of government trying to cooperate effectively to sponsor advisory organizations. In spite of commitments of a series of federal and provincial ministers to enable the BC Government to begin participating in the Council, nothing has been done to make it happen. The lesson in this instance is that the establishment of joint federal and provincial advisory groups can be challenging, but it is nonetheless crucial if the issues are to be addressed from an overall perspective.

The Council also provides a case in point for the importance of advisory and public consensus groups being given sufficient independence and resources. Ever since its initial formation, the Council has been subject to a series of administrative, operational and budgetary restrictions by Fisheries & Oceans Canada which provides its funding. Council members have had to insist on various occasions that these restrictions were infringing on their ability to provide independent advice. The Council has taken the position that they will adhere to all requirements for accountability and integrity in their use of government funds, but need sufficient independence to provide advice that some government officials might not want to be given.

At the same time as all of the members are from outside government, the Council has ex-officio participation by representatives of Fisheries & Oceans Canada and the BC Aboriginal Fisheries Commission, with a spot available for a provincial ex-officio member, to enable liaison with those institutions. This indirect basis of involvement by government officials has enabled the Council to maintain its value and independence while directly exchanging information and views with government officials.

The Council has experienced long delays and apparent confusion in the handling of appointments and re-appointments of Council members. This situation is apparently typical across federal government departments, and is due to the lack of workable guidelines for government personnel on how to deal with advisory groups on both an administrative and policy basis.

5.3 Workers Compensation Board of British Columbia

The Workers Compensation Board of British Columbia has traditionally been led by a Board of Directors composed equally of business and labour representatives nominated by the primary stakeholder groups. This duality of business and labour was considered appropriate to reflect the two primary interest groups concerned with the organization's insurance and prevention mandates. However, this composition led to considerable conflict and persistent polarization of members over the policies and practices of the Board.

In 2002, the new Government of British Columbia decided to forge a different structure for the Board, citing the array of

interests that should be represented beyond business and labour. The Minister of Labour, Graham Bruce, proposed an innovative board composition of individuals, each with different perspectives and backgrounds, but not acting as representatives of any particular organizations. The new board now consists of seven persons with the following backgrounds: employer, worker, actuary, and rehabilitation professional. Three others represent the public interest perspective, two of whom come from academic backgrounds.

The members were selected on the basis of their individual capabilities and their overall recognition for fairness and impartiality, and their general acceptability to the stakeholder communities. They were appointed by the Minister rather than nominated to represent stakeholder organizations.

This board composition is relatively recent, and has yet to be fully tested in practice, but it provides a best practices example in terms of creating a new form of balance in government advisory groups and boards.

5.4 Commission on Resources and Environment

In August 1992, the BC Government arranged for its Commission on Resources and the Environment to start the process of developing a comprehensive land use plan for the parts of Vancouver Island (excluding Clayquot Sound) considered Crown lands. While it started as a consensus-based process, there was little progress made among the forest industry, community, youth, conservation, fisheries, labour, tourism, recreation and First Nations representatives. This failure was in spite of considerable preparation in the form of training for the participants in consensus-building processes and dispute resolution, and only limited points of agreement were successfully negotiated. In early 1994, a plan was recommended by the Commission that lacked endorsement by some key interest groups. That plan evolved over five more years with participation by several stakeholder groups and individuals.

The Commission on Resources and Environment operated during a period of significant court decisions affecting Aboriginal land entitlement and requirements for consultation on matters that could affect land claims and traditional rights. First Nations at that time in British Columbia were concerned that any consensus agreements might jeopardize their land claims, so they were reluctant to participate.

In the view of analysts from the World Resources Institute, there were benefits, although the overall failure of this process was:

...the result of manipulation by vested interests rather than differences in values. Myths were put aside and new ideas won support as mutual respect made all parties more accommodating. Unanimous agreement was achieved on a visions statement for the year 2020, and the year of dialogue built strong support for change in the way decisions are made.

The Commission illustrated the limits of a consensus process that would rely on negotiation procedures, and it provided a perspective on the essential nature of First Nations involvement.

5.5 Land and Resource Management Planning Process

British Columbia embarked in the early 1990s on an effort to establish an extensive public participation and technical evaluation process that would lead to the creation of an integrated resource plan. This Land and Resource Management Planning (LRMP) effort was at the sub-regional level (15,000 to 25,000 square kilometers), compared to the preceding planning that had been on a much larger regional scale. The plans were to provide a comprehensive, broadly accepted and approved management framework for resource development. At the practical level, the planning process was

meant to involve a reconciliation of the competing demands and interests, especially those of the forest industry, Aboriginal communities and environmental advocates.

The planning and execution of the LRMP process was exceptionally well-conducted. It involved the setting of clear principles of public participation and process steps, with scenario development as a basis for building agreement. The government officials involved in the process were given innovative training in techniques to enable them to deal with establishing rapport among the stakeholders and community participants and working towards consensus positions.

The LRMPs welcomed participation by all interested groups and individuals, and used balanced membership in steering committees to ensure that would not be any disparities in representation between what were termed "public values and participant interests".

While politically controversial, the LRMP process was one of Canada's most ambitious and innovative public participation initiatives. Its emphasis on clear procedures and transparent activities provides a valuable template for other government advisory initiatives in Canada and elsewhere.

5.6 Applegate Partnership

A grassroots initiative beginning in 1992 led to the creation of a collaboration among people who had previously been in conflict over the forest resources in the Applegate watershed located in southwest Oregon and northern California. Two individuals who had been on opposite sides of the issues decided that there was more common ground than any of the advocates wanted to admit, and set out to build rapport and joint management processes by the land owners and land management agencies in conjunction with communities and people with various affiliations and interests. .

The Applegate Partnership initiated regular meetings open to everyone, and used volunteers to facilitate discussions and deal with the resolutions of conflicts that had simmered for many years previously. It has a formal structure with a Board of Directors and sponsors various forest and fisheries restoration projects. Its continuing purpose, however, is to enable people to move beyond their entrenched positions and move towards a sense of common understanding and purpose.

It demonstrated how consensus-building initiatives can take place constructively without direct government intervention or participation.

5.7 Churchill Task Force

In 1995, the governments of Canada, Manitoba and Saskatchewan established a task force to investigate how the northern transportation system, grain-handling facilities and Town of Churchill could be saved from an imminent shut-down if Canadian National stopped providing rail service. The task force members included representatives of the railway, port, farmers, bankers, governments, grain marketers, and communities, most of whom had long-standing animosities and had rarely perceived that they had anything in common with one another on any matters.

The task force members had not previously worked together, and in some cases held strong personal loathing for one another and the institutions they represented. They were selected by the government ministers to serve, and induced to participate due to the seriousness of the economic and social consequences of a failure to find a solution.

The chair allowed a degree of venting of pent-up hostility during the first two meetings, but focused the discussion on the need to establish a basis of common, valid information from which conclusions could be drawn and recommendations to government could be developed. In

providing extensive research findings and up-to-date information, much of what previously passed for science or facts proved to be incorrect, invalid or irrelevant. The joint fact-finding process and demonstrations of willingness to listen helped the members to change their attitudes, as did the experience of traveling together and getting to know one another as individuals rather than as institutional representatives.

The recommendations of the Churchill Task Force were adopted by the governments. The task force's advice led to the establishment of a cost-effective alternative rail service, and the rail service, port and Town became even more economically viable. Its success was in achieving a positive outcome that was beneficial to the lives of thousands of Manitobans.

The task force process in this case illustrated how warring factions can be brought together to work cooperatively towards innovative solutions, instead of simply assigning blame to one another as they had been doing for the preceding decades. Personal animosities and mistrust can be overcome in advisory groups if the right approach is taken to explore options and seek constructive answers.

5.8 National Round Table on the Environment and the Economy

This independent advisory organization was created in Ottawa in 1994 to deal with issues related to establishing balance between economic prosperity and environmental preservation. Its members represent several sectors including business, labour, academia, environmental organizations and First Nations. A primary objective is to improve public understanding of environmental and conservation issues by taking an impartial and inclusive approach to their debate and portrayal. The Round Table's programs involve research, analysis, consultations and report-writing, with the goal of making recommendations to the Prime Minister.

A significant aspect of the Round Table's work is its production of state-of-the-debate reports that depict the array of views and alternative ideas related to environmental issues. These reports do not require deliberate consensus-building, since they are meant to explain the context and various viewpoints, rather than force a common position. However, the Round Table members have found that considerable consensus emerges from their discussions, and that they often hold more views in common than they would have expected.

On highly-contentious issues, the preparation of the state-of-the-debate reports proves to be valuable in crystallizing the issues, and forcing a degree of rigour to be applied to the analysis of the positions that organizations are advocating. They allow the stakeholders to make their case and have it fairly represented along with the views of others, in ways that do not necessarily involve choices or judgments to be made.

For the Salmon Aquaculture Forum, this state-of-the-debate reporting approach could enable dialogue to take place without the expectation that in every case a decision would have to be made about which viewpoint might be right or wrong. It enables an opportunity for the parties to begin to understand one another without any requirement for negotiation or adaptation.

5.9 Fisheries & Oceans Pacific Region Consultation Secretariat

The Consultation Secretariat was set up in January 2001 to develop and implement a new strategy for consulting with stakeholders, First Nations and the public. It was established in the wake of suggestions by the Auditor General that also led to the report of the Independent Review of Improved Decision Making. That report called for improved standards of consultation practice, fair and accountable

representation, inclusiveness, First Nations involvement and regional advisory structures to address the shortcomings that stakeholders had identified.

This initiative appears to be the first (and perhaps only) initiative in the Government of Canada to establish and manage a comprehensive public involvement and advisory system. It involves several innovations, including careful planning and structuring of new advisory groups, training for government participants, managers and facilitators, and establishment of clear ground rules for consultation events and advisory group processes.

Unlike other government departments where advisory groups are generally left to their own devices, the Consultation Secretariat serves in coordination and support roles without interfering in the policies or issues that each of them is addressing. Its attention is directed towards ensuring the integrity and effectiveness of the processes and architecture of the consultations and advisory groups.

There are no salmon aquaculture advisory or consultation activities currently under the purview of the Consultation Secretariat. However, when the Salmon Aquaculture Forum is established, it should benefit from having the assistance of the Consultation Secretariat to enable it to be established on a solid footing.

5.10 State of Oregon Advisory System

Public involvement in Oregon state government decision-making is encouraged through extensive use of advisory committees, in addition to boards and commissions that exercise rule-making or regulatory authority in some instances.

The state government provides a highly transparent advisory committee system, with public access to information about activities and participants. One its most valuable initiatives has been to create a publication entitled Membership Handbook for Boards & Commissions to specify in clear language the rules and terms of membership for citizens participating in the state's public institutions.

The handbook provides a valuable reference to encourage citizens to become effective participants, and it explains the various aspects of the board processes and procedures, particularly differentiating the advisory, policy making and judgment functions. It explains not only the function to be served, but the context of the decision-making apparatus of the government and how boards and commissions serve their missions within it. The provision of such member-centered materials to help advisory groups function effectively should be emulated.

5.11 Federal Advisory Committee Act

For more than thirty years, the Government of the United States has had legislation that spells out the requirements related to membership, management, accountability, reporting, operations and procedures of its 1,000 public advisory committees. It specifies that the membership be fairly balanced in terms of the points of view represented and the functions to be performed. It requires that all hearings are open to public participation, and that the minutes and reports are available for public inspection. And, it instructs the executive branch to "institute a comprehensive review of the activities and responsibilities of each advisory committee".

The creation of this legislation forced the US Government in 1972 to actually begin counting the number of advisory groups, establishing a degree of consistency in their staffing and budgets, and clearly stating their terms of reference. A consequence has also been the creation of a network of advisory group managers within the

government, sharing their experiences and adopting best practices.

US Government officials are provided with specialized training before being assigned responsibility for managing and dealing with the advisory committees. They have access to mentoring by experienced advisory group managers, and are able to make tangible comparisons of their resources, staffing and output.

By contrast, few Canadian government officials involved in managing advisory groups have any form of training or preparation for their assignments, apart from subject-matter expertise. Currently, no government in Canada could confidently estimate the number of advisory groups it sponsors, let alone even make an informed guess about the overall costs.

The US legislative approach has provoked lawyers to challenge the practices of advisory committees in that country, in balancing representation, ensuring full public participation and maintaining transparency in the process. While the legislation introduced a degree of administrative and procedural rigidity in the advisory group system, it also enables the participants to function with confidence that compliance keeps the process fair, efficient and accountable.

The establishment of a legislative framework for the conduct of the Salmon Aquaculture Forum, consistent with all other government advisory and consensus-building organizations, would be valuable.

5.12 British Cabinet Office Code of Practice

While the Government of Britain does not have encompassing legislation to underpin its advisory bodies, it has established an extensive but informal set of guidelines for participants and government officials dealing with them.

The British use a model code of practice for board members of advisory non-departmental public bodies, along with a publication that provides guidance on the application of the code. It describes the elements of public service values, standards and roles, and sets out principles for participants to follow.

This approach provides considerable flexibility for advisory groups to be constituted in various forms and operate with their own different rules. It addresses the activities and performance the participants, but does not provide a clear or consistent basis for the conduct of government officials in either managing the processes or receiving the advice they generate.

This informality extends to the criteria and procedures in selecting advisory group members, although the British Government adheres to a set of principles that were set out in a recent royal commission report that suggests best practices for identifying and appointing individuals. The British Government has a Commissioner for Public Appointments who monitors ministerial appointments to public bodies, including advisory groups. That Commissioner encourages diversity, transparency and probity, and deals with public complaints about the activities of the public bodies.

At the same time, the Cabinet Office produces an annual report on task forces, ad hoc advisory groups and reviews, providing public information about their number, mandates and membership. No similar reporting is provided by any government in Canada.

The creation of similar guidelines for advisory groups in Canada could be helpful to structure the Salmon Aquaculture Forum and more readily establish its codes of practice. The Consultation Secretariat in the Pacific region of Fisheries & Oceans is carrying out a review of advisory processes that might lead to the establishment of a

code of conduct and guidelines that other governments in Canada could consider.

5.13 Scottish Executive Non-Departmental Public Bodies

An administrative system similar to Britain's has been adopted by the Scottish Executive to ensure the application of openness and transparency principles for its advisory groups, public corporations and other government entities. A key stated purpose was to ensure diversity in public participation. In order to:

...create a modern and dynamic society in which people from all walks of life play their part, the boards of our public bodies should reflect Scottish society.

Full lists of the advisory and other public bodies, as well as their membership, are made accessible to the public. Information about public appointments in Scotland is made available annually through the British Commissioner for Public Appointments. A consultation paper and formal review of public bodies were produced recently by the Scottish Executive to improve practices.

Despite the policies and stated intent to ensure diversity, the Scottish Executive has been severely criticized for the composition of its recent Ministerial Working Group on Aquaculture which lacked balance and any significant representation from the environmental communities. The Working Group produced an informative report, but the result was tainted by the lack of meaningful participation by a large stakeholder segment. This instance illustrates the importance of having implementation procedures that fulfill, rather than contradict, the policy intent of enabling full public and stakeholder participation.

This system illustrates the importance of having principles and objectives that are applied in practice, not simply stated without actually being implemented. The Salmon Aquaculture Forum requires the establishment of more than an innovative model; it requires the creation of an organization that puts its principles to the test of widespread acceptance and validation.

6. Observations and Considerations for the Forum

This discussion paper is not intended to provide the specific set of recommendations on the structure, membership and activities of the Salmon Aquaculture Forum. That advice is contained in the separate report ***The Salmon Aquaculture Forum: Briefing Note to Ministers*** that accompanies this discussion paper. There are, however, some crucial points that should be considered in the process of establishing the Salmon Aquaculture Forum in addition to the findings and research outlined in the preceding sections.

If it is to succeed, The Salmon Aquaculture Forum will need, in conjunction with the new organization itself, some coincident initiatives and changes of attitude and strategy by stakeholders, First Nations and governments. Suggestions for those coincident changes are contained in the following observations.

6.1 Industry

The public image of British Columbia's salmon aquaculture has deteriorated since its initial period when it was seen as a shining example of new technology and a boon to coastal communities. The controversies of recent years have undermined that image, even though the industry has been making a valuable contribution in terms of regional development, exports and new employment.

The news media instinctively pays more attention to controversial matters than to good news and positive measures to introduce environmentally beneficial processes or innovative business procedures. For example, the environmental operating standards certifications earned by Stolt Sea Farm and Marine Harvest were largely overlooked, even though they demonstrated an achievement in satisfying rigorous environmental criteria.

Still, the adoption of tangible and credible measures to introduce new methods or acknowledge the industry's best practices will eventually pay off in terms of public recognition and acceptance. The effort to employ international certification and independent standards of quality and performance, especially related to environmental sustainability, will be far more effective than waiting for governments to force the adoption of operating regimes that could be costly and inappropriate.

The industry should recognize that the Salmon Aquaculture Forum's existence is inherently to their benefit, more than it is to environmentalists, if only because it creates the conditions for a measured and rational atmosphere for discussion and debate. The *quid pro quo* for this arrangement is an acknowledgement by the industry that the onus is on them to respond directly and clearly to the questions and concerns raised in the Forum's discussions. The industry is expected to demonstrate that the Forum will not simply serve the purpose of alleviating public pressure for tangible action or justify the continuation of all current industry practices.

The prospects for salmon aquaculture are unclear. It has not been reassuring to many British Columbians that the vision of the future of the salmon aquaculture industry seems to be simply more of the same, but on a bigger scale.

The industry has not articulated a sense of its direction, and will need to do so if it hopes to reassure British Columbians that it will evolve, not simply enlarge. The adoption and articulation of a vision for the industry might eventually be a task that the Salmon Aquaculture Forum could pursue, but the industry must begin the process on its own initiative.

6.2 First Nations

A series of aquaculture-related initiatives by First Nations communities and organizations

is going ahead and should be encouraged. Partnerships have been established by First Nations with salmon farming companies, and others are in the process of being considered. The arrangements could enable the environmental issues that are of concern to First Nations to be thoroughly discussed and investigated in advance of the introduction of new sites, as well as monitoring existing facilities.

The use of traditional ecological knowledge in local situations and decisions about the siting of farms, for example, is increasingly being encouraged by the salmon aquaculture companies. The work done over a period of years by the Omega Salmon Group and the Kitkatla Council in the Prince Rupert area has involved a deliberate process of identifying potential environmental problems and mitigating them before the establishment of salmon farms in the area. It has also dealt with the arrangements that could be made to maximize local employment and deliver community benefits.

The involvement of First Nations in environmental monitoring of salmon farms and decisions about appropriate responses to environmental risks is crucial to build local understanding and confidence where it is warranted about salmon farm operations and future development. This sort of relationship will be crucial to future farm development in much of British Columbia, and it demonstrates the unique nature of economic development in regions where the respect for aboriginal rights and local communities requires a different approach than in the past.

At the same time, some First Nations have chosen to declare zero-tolerance for fish farms in their areas. In the absence of sufficient assurances and evidence about the protection of their traditional fish stocks and other impacts, they have decided to oppose salmon farming and reject any involvement in it. While a zero-tolerance position may be a natural reaction to the unknowns about salmon aquaculture risks and potential detrimental effects, it does not contribute to the overall resolution of the problems that are attributed to aquaculture activities.

There may be valid reasons for salmon aquaculture to be limited or disallowed in some areas for environmental, navigation or other reasons, as they are in Norway. But those reasons should be based on valid assessments of risk and on scientific and traditional knowledge bases, rather than simply due to local political conditions. If zero-tolerance is to continue to be an appropriate position for some First Nations, it should not preclude the need for involvement in fact-finding and evaluations of what it would take for salmon aquaculture to be considered sustainable. The full and active involvement of First Nations in the Salmon Aquaculture Forum will help to ensure that environmental protection and sustainability are primary considerations.

6.3 Environmental Advocates

A crucial strategic question that environmental groups face on a regular basis is whether to confront and fight, or seek cooperation and accommodation. While there is not necessarily an either-or choice to be made, the question itself illustrates how the pursuit of environmental causes can involve different routes towards achieving objectives. It is inevitably up to the aquaculture companies to decide about the introduction and management of the environmental technologies and procedures that are being promoted. They can be encouraged to do so for different reasons, and environmental advocates have to determine whether they are actually being persuasive or simply pushing the companies into intransigent positions.

For salmon aquaculture, the markets campaign has been highly confrontational. It would be fair to say that the markets campaign has been effective in raising consumer awareness about the environmental issues in aquaculture and

creating economic and financial pain for the industry. The purpose has been to persuade the salmon farmers to adopt measures that will address the environmental problems. But, it may be too early to conclude whether or not the markets campaign will lead to operational changes in salmon farms or cause the aquaculture companies to react by refusing to be intimidated. The Salmon Aquaculture Forum will have to recognize these circumstances as it proceeds to enable constructive dialogue and lead to innovative solutions.

The dilemma possibly facing the environmental organizations in the near future will be how to change or stop the markets campaign if the salmon aquaculture industry demonstrates significant progress towards reaching the environmental objectives that are being urged. It would be disingenuous to suggest that consumers would be readily willing to accept farmed salmon after previously being frightened by the suggestions of contamination, environmental degradation, and inferior product quality. Turning off the markets campaign would not be an easy task; once started, it gained a life of its own. Environmental groups will have to be careful in their decisions about the markets campaign and what it would reasonably take to call it off. It might then involve a partnership effort by environmentalists with the industry to inform consumers about any new circumstances of farmed British Columbia salmon.

On a different matter, some environmental spokespersons have suggested that the Pacific Fisheries Resource Conservation Council should have an on-going role in the Forum as its organizer and arbiter. The Council members have made it clear that they will not serve in such a continuing role. The Council has a natural bias, as a result of its conservation mandate, towards environmental issues, and the Forum should be painstaking balanced in addressing economic and community issues, along with environmental matters. The Forum might be tainted as being less than impartial if the Pacific Fisheries Resource Conservation Council were to have a direct role in staffing or running it.

6.4 Communities

While the Salmon Aquaculture Forum will operate at the province-wide level, there is a need for a coincident effort at the regional and local levels across British Columbia. The potential value of organizations to deal with salmon aquaculture issues, such as sites of farms, at the area level was previously pointed out in the report of the Salmon Aquaculture Review.

There are several organizations that serve advisory and management functions for coastal, fisheries, land use, habitat, and environmental purposes. They were typically established to perform specific purposes, and they serve as vital sources of input for governments on stewardship, planning and public information. Among these are the Mainland Inlets Stewardship Group's Aquaculture Sub-Committee and West Coast of Vancouver Island Aquatic Management Board. Others organizations with related regional mandates include the Barkley Sound Shellfish Aquaculture Steering Committee and Baynes Sound Aquaculture Forum. Regional district governments in several instances, including Comox-Strathcona and Mount Waddington, have been actively involved in addressing salmon aquaculture issues.

Area management can permit the consideration of watershed and ecosystem perspectives, as well as the interaction of wild and farmed salmon, in contrast with traditional governance and advisory models that tend to segment the consideration of those matters.

The West Coast of Vancouver Island Aquatic Management Board has suggested that it could act in partnership with the Salmon Aquaculture Forum to be a focal

point for local input into the salmon aquaculture debate. It has proposed to serve as a source to inform public discussion through its internet website, as well as undertake the analysis of data from environmental monitoring of salmon farms.

The involvement of the West Coast of Vancouver Island Aquatic Management Board could be on a trial basis to identify how other areas and organizations could supplement the province-wide work of the Salmon Aquaculture Forum and give it a coastal presence at the local and regional levels.

6.5 Government

The governments of British Columbia and Canada are perceived by many people to be showing a bias in favour of salmon aquaculture development at the expense of other crucial values, including environmental integrity and sustainability.

That perception may be unfair or inaccurate, but it is nonetheless prevalent and based on the comments by senior government officials that seem to reinforce an impression of an alliance between the governments and the aquaculture industry against all critics.

Both governments must reorient their approach in this instance if they want to restore their trustworthiness in terms of being seen to pursue the public interest. The aquaculture industry does not need to have its hand held by governments. It needs what all businesses prefer -- fair treatment, consistency in regulatory management, reasonable taxation, and respect for their contributions to the economy.

The salmon aquaculture industry does not need or want special attention or protection by governments. The well-intentioned effort of some government officials to act as the defenders of the salmon aquaculture industry has had the perverse effect of undermining the credibility of both government and industry.

This new approach might involve, as some have suggested, separating the industrial promotion and regulatory functions of both governments into different departments or agencies to eliminate the current confusion facing fisheries managers about their priorities and responsibilities.

The Government of Canada has tried to distance itself in some respects from the salmon aquaculture debates in British Columbia. This has frustrated many people who have felt that Fisheries & Oceans Canada has failed in recent years to take the initiative to regulate and mitigate the effects of aquaculture. There is a widespread impression that the Government of Canada has lost its willingness to act evenhandedly when carrying out its dual roles in promoting salmon aquaculture development and in regulating and protecting wild salmon fisheries.

An example of the ambivalence of the Government of Canada was its March 2001 publication entitled *Legislative and Regulatory Review of Aquaculture in Canada*. This public document was meant to provide a definitive explanation of, among others, the matter of federal and provincial jurisdiction related to aquaculture. However, the entire chapter headed Constitutional and Legal Authority for Aquaculture consisted of two paragraphs, the first of which stated:
In order to maintain the solicitor/client privilege related to the legal services provided by the Department of Justice, this part of the document will remain confidential.

This position of secrecy is inappropriate in a document that is supposed to help inform Canadians about the roles of the two levels of government. Moreover, it was ridiculous for the lawyers to invoke client privilege in this case when the advice was provided to the Aquaculture Commissioner who could have released the information anytime he chose to do so. The laws of solicitor/client privilege give the choice to the recipient of the advice, not to the providers. It is little

wonder that the Canadian public is confused by the jurisdictional issues in aquaculture when the Government of Canada treats its position as a secret, akin to national defence and security.

Both levels of government have to rethink their approach to salmon aquaculture in light of the reality that it should not be treated in the same way as traditional fisheries issues.

Salmon aquaculture requires a government strategy for policy-making and consultation that recognizes that it is dealing, to a great extent, with controversies that do not lend themselves to the same kinds of solutions as, for example, fisheries licensing and allocations. In some respects, the government officials who have had to deal with salmon aquaculture may not have been sufficiently prepared to cope with the array of human health, veterinary, pollution and chemotherapeutant issues that have arisen. This situation should be given consideration in future management decisions by the federal and provincial governments.

6.6 Science and Traditional Knowledge

While the creation of a science panel within the Salmon Aquaculture Forum was proposed earlier this year by the Pacific Fisheries Resource Conservation Council, the discussions with stakeholders and research on best practices have not identified or demonstrated a compelling need to establish a separate science entity when others already exist.

The Forum should make use of a combination of information sources, including scientific and traditional ecological knowledge. But it should do so by first defining its information and data needs rather than leaving it to a group of scientists to determine what the Forum needs to know.

One valuable source of science-based information and evidence-based research findings would be the Western Canadian Universities Marine Sciences Society which is comprised of five universities and based at Bamfield on Vancouver Island. This consortium of researchers from the array of disciplines related to marine and coastal science could serve as an on-tap source of support for the Salmon Aquaculture Forum.

The Society's experience in programs with First Nations provides a basis for it to incorporate traditional ecological knowledge. A cooperative arrangement with independent First Nations' environmental organizations, such as the national Centre for Indigenous Environmental Resources, could provide an ideal combination of capabilities in research, analysis and data gathering to serve the Forum.

The Forum might benefit from the work of a new organization, the Marine Conservation Caucus, that is intended to draw together the research and analytical capabilities of the environmental community to improve the quality of information and contribute more rigorous analysis to the debates on fisheries and other marine issues, including aquaculture. It could also make use of the studies and other work being carried out by EcoTrust and the World Wildlife Fund, among the many sources of information and views on salmon aquaculture.

6.7 Other Aquaculture

It was suggested by some that the Salmon Aquaculture Forum should include the consideration of other species in aquaculture, either currently raised or soon to be introduced in ocean farming. These species include shellfish, for example, and could soon include sablefish.

There are strong reasons for a comprehensive aquaculture advisory organization that would extend beyond salmon to include all marine species. They are connected in many ways, and it would be hoped that the introduction of new species into aquaculture would not lead to

the same sort of controversy that has developed for salmon. However, there is an immediate need for a Forum to address salmon aquaculture, and it would be regrettable if the inclusion of other species meant not only a dilution of the focus on solutions for salmon aquaculture, but a lack of sufficient time to address the other species. If the Forum would maintain its focus entirely on salmon aquaculture, at least in its initial stages, it could provide a template for the other species to be considered in a similar fashion later.

7. Building Advisory and Consensus Organizations

This discussion paper has been primarily about the Salmon Aquaculture Forum and the advisory and consensus-building functions it would serve in dealing with issues related to aquaculture. At the same time, it would be unfortunate if the governments of Canada and British Columbia and elsewhere in Canada did not make use of the research, findings and conclusions contained in this discussion paper to make systemic improvements to their advisory systems.

The problems and, in some cases, failures of advisory organizations dealing with various topics of public policy have remarkable similarities, regardless of the issues they address. Some government departments and agencies are constantly repeating their mistakes in organizing and managing their advisory groups because they lack the guidance, expertise or support to make the necessary improvements and reduce their costs. The disjointed advisory groups collectively cost millions and millions of dollars, work with little direction or sense of influence, and often disappoint elected officials and other government decision-makers with unwarranted criticism or impractical, unworkable and ill-timed recommendations.

The importance of advisory groups has grown with the changes in government management during the past decade, particularly the reduction in staff and capacity for policy development. Faced with budget crunches, the federal and provincial governments across Canada for more than a decade have eliminated the specialized functions and personnel in stakeholder relationship management and policy development. The result has been that many governments have lost the internal capacity to cope with consensus-building through public participation and stakeholder involvement.

At the same time, there have been no significant academic studies or evaluations of Canadian government advisory groups. The subject has been overlooked by university researchers who have tended to treat advisory groups simply as a sub-set of pressure group politics. The result has been that government officials have had no reliable basis to evaluate the impact or potential of advisory groups, or even begin to improve their structure and use.

7.1 Quality and Consistency

The management of external advisory groups to government, such as the Salmon Aquaculture Forum, must become more uniform and professional. There should be a coordinated approach for the thousands of such groups that operate across the governments at all levels.

The federal and provincial governments could start by establishing an inventory, counting the numbers of their advisory groups and assembling basic information for comparison purposes about their characteristics, specifically their size, budgets, and staffing. Even this simple information is currently missing.

Governments in Canada should identify appropriate performance measures for advisory committees and require public reporting of their activities and results. In the absence of useful operational or results-oriented criteria, governments do not typically get enough value for their money from advisory groups.

The governments should arrange for interviews with past chairs and members of their advisory groups, as well as the stakeholders dealing with them, to identify the strengths and weaknesses of the advisory organizations. This should involve assessing the reasons for the frustration or satisfaction of the participants, and their ideas about how the advisory groups could become more effective. As well, interviews with ministers and senior public servants could point to the

ways in which advisory groups could become more valuable contributors to government decision-making.

7.2 Codes and Practices

The federal and provincial governments should consider introducing legislation that lays out the essential framework for the setting of authorities and prerogatives of advisory groups. For example, it could specify the criteria for membership selection and state what would constitute fair procedural rules. While legislation would reduce the flexibility of government managers to deal with advisory groups, it would force accountability for the work of the participants and for government officials to take the advice more seriously and provide timely responses. The absence of clear standards and stated expectations has been detrimental to the effectiveness of Canada's advisory groups. Legislation would provide an obvious message that the priority should be placed on improving advisory group processes.

In the absence of legislation, the governments could establish procedural requirements to enable the advisory groups to act within clearly-stated guidelines and principles. For instance, it would be especially helpful to have a directive on the factors to consider in establishing diversity within advisory groups. The definition of a set of principles regarding matters, such as transparency of activities and inclusiveness in consultations and discussions, would help to make advisory groups more effective and credible to the public.

7.3 Management Training

Government officials currently lack access to Canadian training courses, academic studies or case studies that could enable them to manage advisory groups or work effectively with them. That oversight in public sector managerial education should be rectified.

The task of leading the province's advisory group management development should be assigned to the new BC Leadership Centre. Its purpose is to enable government leaders to have the knowledge, support and service they need, and provide executive development through education, training and growth. This initiative could focus on competence criteria and cost containment in advisory group and consultation management, and it would be one of the first projects of its kind in Canada.

The pilot projects and training being introduced by the Fisheries & Oceans Pacific Region Consultation Secretariat are the exception. That Secretariat is taking an approach to procedures and a code of conduct for advisory groups that should be strongly supported and emulated in other federal government departments and agencies across Canada. The Secretariat should serve as a primary contact point for liaison between the Salmon Aquaculture Forum and Fisheries & Oceans Canada.

The Canadian Centre for Management Development, the federal government's training organization for senior managers, should be introducing programs to rectify the lack of opportunities for government officials to learn how to manage and deal with advisory groups. The Centre has done some work in the past regarding public participation and citizen involvement, but this has had limited relevance for the managers of Canadian government advisory organizations. By comparison, the US Government offers two-day training courses several times each year to enable its advisory group managers to become proficient and aware of best practices. The lack of any government-wide training in this field anywhere in Canada is regrettable, and the oversight should be addressed soon.

8. APPENDICES

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8.2 Statement on May 12, 2003 by John Fraser on the Salmon Aquaculture Forum

The federal and BC governments have agreed to set up a Salmon Aquaculture Forum. As the news release issued earlier this month stated, Ministers Hagen, Thibault and van Dongen have asked me to assist in the process of bringing together everyone who should be involved. The founding of the Forum is an unprecedented effort by both levels of government to improve the dialogue and seek constructive solutions to controversies associated with salmon aquaculture.

The Pacific Fisheries Resource Conservation Council is privileged to take on this task in the Forum's initial phase. We had proposed the creation of this innovative organization earlier this year to fulfill the need for a process to build public consensus and identify future practical options in salmon aquaculture. The Council's role will be limited to acting as a catalyst in the formulation and planning stage during the next three months.

The Forum is meant to provide a fresh start to overcome the deep suspicion and widespread lack of trust that has permeated all aspects of the salmon aquaculture debates. It is intended to help build public confidence that all stakeholders and First Nations participants are willing to contribute to finding practical solutions. The governments recognize that it is critical that the people who are going to be part of the process be part of the design of the process. The stakeholders, First Nations and interested British Columbians will have a role in determining who will ultimately facilitate and assist in building an effective new entity.

In broad terms, I have been given a mandate to:

- engage the array of stakeholders and First Nations in the process of formulating and becoming committed to a Salmon Aquaculture Forum; and
- identify how the stakeholders and aboriginal organizations could work most productively towards common objectives, and what the ground rules should be.

Therefore, I will be developing preliminary terms of reference for the Forum. It is recognized that, as the Forum evolves, it should take on progressively greater roles. The initial focus should be identified in terms of what is desirable and achievable within the current context.

I will be proceeding in the following steps:

1) Call for stakeholder, First Nations and public suggestions on what principles would drive an effective Forum, and invite comment through written submissions, e-mail responses through the Council website, and informal discussions.

2) Hold a series of interviews and bilateral discussions with key stakeholder groups, individuals, and First Nations organizations, including a series of small, informal roundtable discussions with selected stakeholders to determine and explore appropriate approaches to establish initial Forum representation and commitments to participate.

3) Production of a two-part public discussion paper by mid-August. Part One would identify best practices for establishing processes with similar goals as the proposed Forum, with particular attention to advisory groups dealing with aquaculture and natural resource issues in Canada and other countries. In addition, the role of science and its contribution to conflict resolution in resource issues will also be considered.

   Part Two would outline the findings of the public suggestions, interviews, and roundtables, for the purpose of generating comment and alternatives. It would propose terms of reference for a Salmon Aquaculture Forum, recommend on the membership, provide a candid appraisal of the

commitments that would be required to make the organization useful, effective and sustainable in the long-term, and produce a consensus-based business plan to guide implementation.

4) Production of a briefing note to federal and provincial ministers on:

   - Forum options and structures in light of the cross-jurisdictional nature of aquaculture, First Nations issues, and the wide-range of interested parties wishing to be involved;
   - Funding options to cover the costs of an on-going Forum;
   - The need for local area management structures that include First Nations and stakeholder participation; and,
   - Identifying an interim group of facilitators and advisors who would manage the implementation phase of the Forum.

The four-step approach would lead to the public discussion paper in August and a briefing note to federal and provincial ministers with recommendations for implementation. We expect that the project will take about 14 weeks.

I have asked Ken Beeson, a consultant and policy adviser to the Pacific Fisheries Resource Conservation Council, to work closely with me to conduct interviews and obtain an array of perspectives on how the Forum should be organized and work. We have already put forward our suggestion that the Forum should be transparent, open and approachable. It should have a capacity for the consideration of research and encourage studies that expand our scientific knowledge. It needs to be independent and have full First Nations involvement.

We have anticipated a healthy public skepticism about the possible effectiveness of the Forum and the sincerity of some of those who might be involved. The public discussions about salmon aquaculture have too often been highly emotional, bitter and personalized. In our recent Advisory, we explained:

> *The debates around wild salmon and aquaculture generally reflect a lack of trust and a perceived unwillingness on all sides to engage in meaningful dialogue. In the view of the Council, a change of attitude and strategy by government officials and stakeholders is an essential first step towards rebuilding common ground in which both environmental and commercial interests can be frankly but constructively discussed and accommodated.*

Our intention is to help create an innovative way to channel the public concern and interest into a productive effort. We reiterate the reason for this Forum:

> *In the view of the Council, the problems of aquaculture and wild salmon are not impossible to address. However, an impasse has been reached in the debates on the significant matters of public concern. The problems of aquaculture require new ideas, public consensus and creative solutions that are not now being generated by governments and stakeholders within the existing institutions and framework for discussing the future of wild salmon and aquaculture.*

We have not taken on this project with any illusions about the challenges involved in this task. It will require the sincerity and good will of the governments, stakeholders and First Nations to make a Salmon Aquaculture Forum workable and sustainable. Our Council is willing to risk the possibility of failing at this effort because we believe that decisions in the near-future about wild salmon and aquaculture are so crucial to the environmental and economic prospects of British Columbia. We make no apologies for being considered idealistic in our pursuit of this objective.

8.3 Authors and Acknowledgement

The Honourable John A. Fraser is Chairman of the Pacific Fisheries Resource Conservation Council. He also chairs the Parliamentary Buildings Advisory Council and the Minister of National Defence's Monitoring Committee on Change in the Canadian Forces. His distinguished career has included public service as Canada's Ambassador for the Environment, and he was the first Speaker of the House of Commons to be elected by his peers. During his twenty-one-year political career as a Member of Parliament from Vancouver, John Fraser was Canada's Minister of the Environment and later was Minister of Fisheries. He is a lawyer and was recently awarded honourary doctorates from Simon Fraser and St. Lawrence universities for his contributions to environmental causes.

Kenneth Beeson is Managing Director of PPM Public Policy Management Limited's consulting practice. He has served as senior counsel and advisor to task forces, advisory groups and commissions of inquiry across Canada, as well as international agencies. He has more than a decade of experience in planning, designing and managing unique advisory and policy research organizations, such as the Liu Institute for Global Issues at the University of British Columbia and the Green Corridors trade and transportation network across North America. His business career has included executive assignments in international partnerships and marketing, later serving as a lobbyist for the Royal Bank of Canada and as President & CEO of the Aerospace Training Canada International consortium. He is a graduate in economics from the University of Saskatchewan and in public administration from Carleton University.

The authors wish to express their thanks to the hundreds of British Columbians who participated in the discussions and dialogue on the formation of the Salmon Aquaculture Forum. They are especially grateful for the excellent staff support provided by Gordon Ennis and Dr. Brian Riddell of the Pacific Fisheries Resource Conservation Council, and the first-rate work of Ken Floe who served as their primary legal and policy researcher.

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8.4 Pacific Fisheries Resource Conservation Council

The effective conservation of Pacific Salmon requires a comprehensive effort by governments acting with an informed and involved public. The work of the Pacific Fisheries Resource Conservation Council in the past year has been directed towards encouraging the rebuilding of key salmon stocks and the restoration of habitat conditions that are crucial for future stability in British Columbia's salmon populations.

The Council has highlighted the risks resulting from the recent and proposed government funding reductions in programs that have been instrumental in monitoring and restoring salmon stocks. It has proposed that resources be refocused, especially into habitat initiatives that could maintain genetic diversity of salmon populations in crucial areas.

During the past year, the Council members have pointed out the shortcomings of the results-based management approach, and suggested that stringent regulatory and enforcement measures be maintained, particularly where there are irreversible consequences of salmon declines. The Council was involved in the conservation aspects of the Fraser River sockeye fishery and the Okanagan ecosystem restoration, providing support for measures aimed at protecting the salmon stocks.

The declines in pink salmon returns and evidence of extensive sea lice in the Broughton Archipelago led the Council to carry out consultations and produce an advisory that proposed an extensive change in the management of fish farms in the area. The governments of Canada and British Columbia subsequently introduced significant measures to monitor conditions and reduce potential exposure of wild pink salmon and other smolts to sea lice.

The Council sponsored a consultant's study that examined the assumptions and scientific information supporting the divergent arguments about interactions between wild and farmed salmon. Their background paper pointed to sea lice as the most immediate area of risk, and presented an evaluation of the other risk factors related to bacteria and viruses, escapes, and habitat impacts. The Council's advisory on aquaculture and wild salmon led to the acceptance of that report's most crucial recommendations, including the creation of a Salmon Aquaculture Forum to enable more constructive public dialogue on aquaculture issues.

In the current year, the Pacific Fisheries Resource Conservation Council's agenda includes its contribution to establishing the Salmon Aquaculture Forum, initiation of a consultant's study on hatcheries, and preparation of a report on the impacts of low water levels on salmon. The Council will also complete its detailed report on the northern and central coast stocks to complement last year's exhaustive study of southern British Columbia's salmon stocks.

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